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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent Application of	)	
WATANABE	)	**Art Unit 2186**
Application Number: 10/790,175	)	
Filed: March 2, 2004	)	
For: METHOD AND APPARATUS OF REMOTE COPY FOR MULTIPLE STORAGE SUBSYSTEMS	)	
Attorney Docket No. HITC.0003	)	

Honorable Assistant Commissioner
for Patents
Washington, D.C. 20231

PETITION TO MAKE SPECIAL UNDER 37 C.F.R. § 1.102(d) FOR ACCELERATED EXAMINATION

Sir:

Pursuant to 37 C.F.R. § 1.102(d), Applicant respectively requests that the application be examined on the merits in conjunction with the pre-examination search results, the detailed discussion of the relevance of the results and amendments as filed concurrently.

Substantive consideration of the claims is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and telephone number indicated below.

Respectfully submitted,

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12/05/2005 JADDO1 00000015 10790175
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SUPPLEMENTAL STATEMENTS & PRE-EXAMINATION SEARCH REPORT IN SUPPORT OF THE RENEWED PETITION TO MAKE SPECIAL

Sir:

Pursuant to 37 C.F.R. §§ 1.102 and MPEP 708.02 VIII, Applicant hereby submits that (1) all claims of record are directed to a single invention, or if the Office determines that all the claims presented are not obviously directed to a single invention, will make an election without traverse as a prerequisite to the grant of special status; (2) a pre-examination search has been conducted according to the following field of search; (3) copies of each reference deemed most closely related to the subject matter encompassed by the claims are enclosed; and (4) a detailed discussion of the references pointing out how the claimed subject matter is patentable over the references is also enclosed herewith.

FIELD OF THE SEARCH

Class	Subclasses
711	161, 162 (U.S. & foreign)
707	directed keyword (U.S. & foreign)
711	directed keyword (U.S. & foreign)

The search was directed towards a method and apparatus of remote copy for multiple storage subsystems. With reference to the disclosure, FIG. 1 illustrates a data processing

system 100 including a plurality of host computers 101, a plurality of primary storage subsystems 102 #1, 102 #2, and a plurality of secondary storage subsystems 102 #3, 102 #4, 102 #5. See section [0023]. The host computer 101 issues I/O requests 106 to primary volumes. See section [0028]. If an I/O request 106 is an update request, the corresponding primary storage subsystem issues a remote copy request 120 addressed to the corresponding secondary storage subsystem. See section [0029]. The remote copy request 120 includes a timestamp included in the I/O request 106. Id. When receiving a remote copy request 120, the secondary storage 102 #3 enters it into a remote copy queue 115. See section [0030]. Each logical volume of the primary storage subsystems 102 #1, 102 #2 periodically issues a synchronize request 107 addressed to either all secondary logical volumes or all secondary storage subsystems in the same consistency group. See section [0033]. Referring to FIG. 4, a synchronizing method 400 comprises the steps of receiving timestamp 401, comparing times 402, checking if updated 403, assessing and updating transit status 404, and synchronizing. See section [0058]. All secondary storage subsystems 102 execute the remote copy procedure and the synchronization procedure illustrated in FIG. 5. See section [0060]. As shown in FIG. 5A, only I/Os with timestamps less than or equal to the time indicated by parameter 112-1 are moved from the remote copy queue 115-1 to the disk request queue 116-1. See section [0062]. In FIG. 5B, the secondary storage subsystem 102 #3 retrieves the timestamp from the synchronize request 107 and compares the retrieved timestamp with the timestamp indicated by time parameter 111-1 #1 or 111-1 #2. See section [0063]. If the retrieved timestamp is greater than the corresponding time parameter 111-1, an update occurs. Id.

In particular, the search was directed towards independent claim 1, which recites, in a system including a plurality of primary storage subsystems and a plurality of secondary storage subsystems that are connected to each other via a network, a method for remotely copying data from each of a plurality of primary volumes to a corresponding secondary volume from a plurality of secondary volumes, and wherein the secondary volumes are presented by the secondary storage subsystems, the method comprising the steps of receiving, at each of the secondary storage subsystems, remote copy requests each of which is associated with a timestamp from at least one of the plurality of primary storage subsystems, receiving, at each of the secondary storage subsystems, synchronizing requests each of which is associated with a timestamp from a corresponding primary storage subsystem, determining, at each of the secondary storage subsystems, a first time as a first time parameter based on the timestamps including in the sync requests, and determining, at each of the secondary storage

subsystems, which remote copy requests to process based on the first time parameter and timestamps associated with the remote copy requests.

In particular, the search was also directed towards independent claim 8, which recites a software for remotely copying data from each of a plurality of primary volumes to a corresponding secondary volume from a plurality of secondary volumes implemented in a data storage system that includes a plurality of primary storage subsystems and a plurality of secondary storage subsystems that are connected to each other via a network, wherein the primary volumes are presented by the primary storage subsystems, and wherein the secondary volumes are presented by the secondary storage subsystems, the software system comprising means for receiving, at each of the secondary storage subsystems, remote copy requests which are each associated with a timestamp from at least one of the plurality of primary storage subsystems, a module for receiving, at each of the secondary storage subsystems, synchronizing requests which are each associated with corresponding timestamps from corresponding primary storage subsystems, and a module for determining, at each of the secondary storage subsystems, a first timer as a first timer parameter based on the timestamps included in the sync requests, and means for determining, at each of the secondary storage subsystems, which remote copy requests to process based on the first time parameter and timestamps associated with the remote copy requests.

In particular, the search was also directed towards independent claim 15, which recites, in a system for remotely copying data from each of a plurality of primary volumes to a corresponding secondary volume from a plurality of secondary volumes implemented in a data storage system that includes a plurality of host computers, a plurality of primary storage subsystems and a plurality of secondary storage subsystems, all connected to each other via a network, wherein the primary volumes are presented by the primary storage subsystems, and wherein the secondary volumes are presented by the secondary storage subsystems, each of the host computers implementing said system that comprises means for receiving, at each of the secondary storage subsystems, remote copy requests which are each associated with a timestamp from at least one of the plurality of primary storage subsystems, means for receiving, at each of the secondary storage subsystems, synchronizing requests which are each associated with corresponding timestamps from corresponding primary storage subsystems, means for determining, at each of the secondary storage subsystems, a first timer as a first time parameter based on the timestamps included in the sync requests, and means for determining, at each of the secondary storage subsystems, which remote copy requests to

process based on the first time parameter and timestamps associated with the remote copy requests.

LIST OF RELEVANT REFERENCES

U.S. Patent Number	Inventor(s)
5,504,861	Crockett et al.
6,301,643	Crockett et al.
6,484,187	Kern et al.
6,813,683	Tabuchi et al.
6,842,825	Geiner et al.

U.S. Publication Number	Inventor(s)
2005/0160248	Yamagami

Non-Patent Documents	Author(s)
Advanced functions for . . .	Azagury et al.

Discussion of References:

It is submitted that the cited references, whether taken individually or in combination with each other, fail to teach or suggest the invention as claimed. The cited references, at a minimum, fail to teach or suggest in combination with each other the limitations recited in the claims. In particular, at least the features of (1) "a method for remotely copying data from a plurality of primary volumes to a plurality of secondary volumes comprising determining which remote copy requests to process based on a first time parameter and timestamps associated with the remote copy requests" as now recited in claim 1; (2) "a software for remotely copying data from a plurality of primary volumes to a plurality of secondary volumes comprising a module for determining, at each of the secondary storage subsystems, which remote copy requests to process based on first time parameter and timestamps associated with the remote copy requests" as now recited inc claim 8; and (3) "a system for remotely copying data from each of a plurality of primary volumes to a plurality of secondary volumes comprising means for determining, at each of the secondary storage subsystems,

which remote copy requests to process based on the first time parameter and timestamps associated with the remote copy requests" as now recited in claim 15, are patentably distinct from the cited prior art references.

In a system including a plurality of primary storage subsystems 102 #1, 102 #2 and a plurality of secondary storage subsystems 102 #3, 102 #4, 102 #5 that are connected to each other via a network, the method for remotely copying data from each of a plurality of primary volumes to a corresponding secondary volume from a plurality of secondary volumes of the invention (for example, the embodiment depicted in Figs. 1 & 5; [0056]-[0063]), as recited in claim 1, wherein the primary volumes are presented by the primary storage subsystems 102 #1, 102 #2, and wherein the secondary volumes are presented by the secondary storage subsystems 102 #3, 102 #4, 102 #5, the method comprising the steps of: receiving, at each of the secondary storage subsystems 102 #3, 102 #4, 102 #5, remote copy requests (e.g., io-10 (T0), io-11 (T3), io-12 (T4), io-13 (T6), io-14 (T7) in 102 #3) each of which is associated with a timestamp (e.g., T0, T3, T4, T6, T7) from at least one of the plurality of primary storage subsystems 102 #1, 102 #2; receiving, at each of the secondary storage subsystems 102 #3, 102 #4, 102 #5, synchronizing requests 107 each of which is associated with a timestamp T7 from a corresponding primary storage subsystem 102 #1 ([0063]); determining, at each of the secondary storage subsystems 102 #3, 102 #4, 102 #5, a first time as a first time parameter T5 based on the timestamp T7 included in the sync requests 107; and <u>determining, at each of the secondary storage subsystems 102 #3, 102 #4, 102 #5, which remote copy requests (e.g., io-10 (T0), io-11 (T3), io-12 (T4), io-13 (T6), io-14 (T7) in 102 #3) to process ([0063]) based on the first time parameter T7 and timestamps (e.g., T0, T3, T4, T6, T7) associated with the remote copy requests</u>, i.e., a remote-copy-request discriminative processing scheme

For example, if the retrieved timestamp T7 is greater than the corresponding time parameter 111-1 #1 T3, an update occurs (Fig. 5B. As T7 > T3, the time parameter 111-1 #1 is updated from T3 to T7 in 102 #1). This update makes the time parameter 111-1 #1 T7 greater than the time parameter 111-1 #2 T5, so that time parameter 112-1 is updated to T5. When the time parameter 112-1 is updated, since the timestamp (T7) associated with io-12 is greater than the timestamp (T5) that time parameter 112-1 indicates, only io-12 (T4) *(but not io-13 (T6), io-14 (T7)*, is moved to the disk request queue 116-1. As another example shown in Figs. 7A-C ([0074]), T3, T5 are determined to be the synchronized times for the secondary storage subsystems 102 #3-5. These changes cause the time parameters 112-2 and 112-3 to be updated to T3 such that io-23 (T2) and io-31 (T2) are moved to the disk request queues 116-2 and 116-3, respectively.

To the extent applicable to the present Petition, Applicants submit that although the distinguishing feature(s) may represent a substantial portion of the claimed invention, the claimed invention including said feature(s) and their inter-operation provides a novel disk array device.

U.S. Patent No. 5,504,861 to Crockett et al. (hereinafter "**Crockett '861**") relates to remote data duplexing. FIG. 4 illustrates an asynchronous disaster recovery system 400 including a primary site 421 and a remote or secondary site 431. The primary processor 401 includes application programs 402, 403 and a primary data mover ("PDM") 404. The primary storage controllers 405 and the primary DASDs 406 form a primary storage subsystem. The secondary site 431, located remotely from the primary site 421, includes a secondary processor 411 having a secondary data mover ("SDM") 414 operating therein. The storage controllers 415 and DASDs 416 and 417 comprise a secondary storage subsystem. FIGS. 5 and 6 show a journal record format created by the PDM 404 for each self describing record, including a prefix header 500 (FIG. 5), and a record set information 600 (FIG. 6) as generated by the primary storage controller 405. The operational time stamp 502 and the records read time 507 are used by the PDM 404 to group sets of read record sets from each of the primary storage controllers 405. After all read record sets across all primary storage controllers 405 for a predetermined time interval are received at the secondary site 431, the SDM 414 interprets the received control information and applies the received read record sets to the secondary DASDs 416 in groups of record updates such that the record updates are applied in the same sequence that those record updates were originally written on the primary DASDs 406. However, the secondary storage subsystem of **Crockett '861** only receives copy requests associated with a timestamp from a plurality of primary storage subsystems, but does not determine any first time parameter based on timestamps included in a synchronization request. As such, **Crockett '861** also does not make use of such a timestamp to process the remote copy requests at each of the secondary storage subsystems differently, i.e., to determine, at each of the secondary storage subsystems, which remote copy requests to process based on a respective first time parameter/timestamp included in a synchronizing request issued by a corresponding primary storage subsystem and timestamps associated with the remote copy requests. Since **Crockett '861** fails to provide any such a <u>remote-copy-request discriminative processing scheme</u>, it does not provide the (1)-(3) features as now recited in the independent claims.

U.S. Patent No. 6,301,643 to Crockett et al. (hereinafter "**Crockett '643**") relates to multi-environment data consistency. FIG. 1 illustrates an environment including an

application system 2, primary 4 and secondary 6 storage controllers, primary 8 and secondary 10 direct access storage devices ("DASD"), and a host system 12. FIG. 2 illustrates logic implemented as software and/or hardware logic in the host system 12 for insuring data consistency at a user specified cut-off time. Control begins at block 20 which represents a user entering a command at the host system 12 to insure data consistency at a user specified cut-off time. Control then transfers to block 22 which represents the host system 12 querying the primary controllers 4 to obtain any data writes and metadata describing the data writes received by the primary controllers 4 from the application system 2, including the time stamp information, since the last consistency group was formed. If, at block 24, there were data writes indicated in the query as of the last consistency time, then control transfers to block 26 which represents the host system 12 determining the maximum time stamps of data writes for all primary controllers 12 in the system. If the minimum of the maximum of the time stamps is earlier in time than a user-specified target cut-off time, then, at block 38, the host system 12 forms a consistency group including all data writes having time stamps between the last consistency group time and the minimum (oldest) of the maximum (most recent) of the time stamps. If the minimum of the maximum time stamps is at or later in time than the target cut-off time, then control transfers to block 36 which represents the host system 12 forming a consistency group including all recent data writes from all primary storage controllers 4 having time stamps between the last consistency group consistency time and the target cut-off time. The secondary storage controller 6 then applies the data writes to the secondary DASD in sequential order. However, the secondary DASD of **Crockett '643** only forms consistency groups based on a user-specified cut-off time, rather than any first time parameter based on a timestamp included in a synchronization request. **Crockett '643** simply does not determine any first time parameter based on timestamps included in a synchronization request. As such, **Crockett '643** also does not make use of such a timestamp to process the remote copy requests at each of the secondary storage subsystems differently, i.e., to determine, at each of the secondary storage subsystems, which remote copy requests to process based on a respective first time parameter/timestamp included in a synchronizing request issued by a corresponding primary storage subsystem and timestamps associated with the remote copy requests. Since **Crockett '643** fails to provide any such a remote-copy-request discriminative processing scheme, it does not provide the (1)-(3) features as now recited in the independent claims.

U.S. Patent No. 6,484,187 to **Kern** et al. relates to coordinating remote copy status changes across multiple logical sessions to maintain consistency. FIG. 1A illustrates a data storage system with a primary control unit 104 providing one or more host computer 106 access to a primary DASD. A secondary DASD 122 maintains back-up copies of some or all volumes of the DASD 108, under direction of a secondary control unit 120. For each primary volume, there is a corresponding secondary volume with identical contents; this is a volume pair. FIG. 1B illustrates a multi-session system 100 comprising multiple instances of the primary and secondary storage controller system pairs interconnected to form a single mass storage space. FIG. 4 shows a sequence 400 by which a master data mover submits a universal command for performance by all sessions. The steps are initiated in step 402, when one of the sessions receives a command request from a "host initiator." If the current command is proper, the master data mover proceeds by preventing any changes to the master data set 162 (step 404). The master data mover then posts the current command in the common area of the master data set 162 (step 406) for execution by the slave data movers. Next, the master data mover queries the slave data movers to return consistency timestamps (step 408). Each consistency timestamp represents the past time to which data in that session is recoverable. In step 410, the master data mover identifies the most recent one of these returned consistency timestamps from step 408. Next, the master data mover determines whether the start time from step 402 is at or after the last timestamp from step 410. If so, this means that the requested time can be reached in a consistent manner. In this case, the master data mover lists an execute instruction in the common area of the master data set 162. However, **Kern**'s master data mover merely uses a timestamp to determine "<u>whether an instruction may be executed in a consistent manner</u>", rather than to determine "<u>which remote copy requests to process</u> (based on a respective first time parameter/timestamp included in a synchronizing request issued by a corresponding primary storage subsystem and timestamps associated with the remote copy requests)". Since **Kern** fails to provide any such a <u>remote-copy-request discriminative processing scheme</u>, it does not provide the (1)-(3) features as now recited in the independent claims.

U.S. Patent No. 6,813,683 to **Tabuchi** et al. relates to a method and apparatus for copying data from a main site to a remote site. FIG. 1 illustrates a system with a main center 9 and a remote center, each including a host unit 1, 8. The master disk subsystem 3-1 of the main center 9 is connected with a disk subsystem 7-1 of the remote center 10 through an interface cable 4-1. The slave disk subsystem 3-n is connected with a disk subsystem 7-n of

the remote center through an interface cable 4-n. Because the master disk subsystem 3-1 has control bits that indicate the state of the remote copy inside the remote copy control information storing part 16, a system operator can temporarily suspend the remote copy state by altering the control bits by instruction or at a predetermined time. When the remote copy is temporarily suspended, the disk subsystems 3-1, 3-2, . . . 3-n store the update data in the data buffer 12 of their own disk subsystems, retain the information of the address of the update data in the remote copy control information storing part 16, and suspend the write instruction of the update data to the disk subsystems 7-1, 7-2, . . . 7-n. The coherence between the data on the side at the main center 9 and the data on the side of the remote center 10 at the time of temporary suspension can therefore be secured. Consequently, the necessity of adding time stamps to the data for securing coherence is eliminated and the remote copy is realized without the intervention of a host unit. However, **Tabuchi**'s master disk subsystem 3-1 only receives remote copy requests from a host data unit, but does not determine any first time parameter based on timestamps included in a synchronization request. As such, **Tabuchi** further does not make use of such a timestamp to process the remote copy requests at each of the secondary storage subsystems differently, i.e., to determine, at each of the secondary storage subsystems, which remote copy requests to process based on a respective first time parameter/timestamp included in a synchronizing request issued by a corresponding primary storage subsystem and timestamps associated with the remote copy requests. Since **Tabuchi** fails to provide any such a <u>remote-copy-request discriminative processing scheme</u>, it does not provide the (1)-(3) features as now recited in the independent claims.

U.S. Patent No. 6,842,825 to **Geiner** et al. relates to adjusting timestamps to preserve timing information for cached data objects. FIG. 1 illustrates a system 100 including a cluster subsystem 102, a primary storage subsystem 104, a secondary storage subsystem 106, and a data mover 108. The cluster subsystem 102 is located at a primary site 109. The primary storage subsystem 104, which is located at the primary site 109, includes a primary (storage) controller 134 coupled to a primary storage 136 and to the hosts 110, 112, 114. The secondary storage subsystem 106, which is located at a secondary site 152, includes the secondary storage controller 148, which is coupled to a secondary storage 154. The data mover 108 is located at the secondary site 152. FIGS. 7A, 7B, and 7C are flowcharts of a sequence for temporarily caching data for storage in a primary subsystem for asynchronous mirroring with sacrificing timestamp information. Step 704 is performed in response to the host applications generating, receiving, designating, or otherwise identifying data updates for

storage. The host 110 directs the coupling facility 120 to store some data objects in the cache 128, and also directs the primary controller 134 to store other data objects in the primary storage 136. The host 110 also directs the coupling facility 120 to store an original timestamp corresponding to the data object. Also in step 704, along with each data object stored in the primary storage 136, the host directs the primary controller 134 to store a current timestamp associated with the data object. In step 705, the host 110 begins cache destaging. Generally, this entails the host 110 taking each cached data object and an "advanced" timestamp corresponding to the data object and sending them to the primary controller 134 for storage in the primary storage 136. In step 705 the host 110 asks whether the cache 128 is full. If the cache is "full," step 705 advances to step 710, which begins destaging the cache to primary storage 136. On the other hand, if the cache is not "full," step 705 advances to step 707, which begins a process of repeatedly sending a data object to primary storage 136 on a predetermined schedule. However, **Geiner**'s coupling facility 120 only ***stores*** a timestamp for each cached data object in response to a data update, but does not make use of the timestamps to ***process*** the remote copy requests at each of the secondary storage subsystems differently, i.e., to determine, at each of the secondary storage subsystems, which remote copy requests to process based on a respective first time parameter/timestamp included in a synchronizing request issued by a corresponding primary storage subsystem and timestamps associated with the remote copy requests. Since **Geiner** fails to provide any such a remote-copy-request discriminative processing scheme, it does not provide the (1)-(3) features as now recited in the independent claims.

U.S. Publication No. 2005/0160248 to **Yamagami** relates to a distributed remote copy system. FIG. 1A illustrates a remote copy system 50 having a plurality of primary storage systems or subsystems 100a, a plurality of secondary storage subsystems 100b, and an intermediate storage subsystem 100c. The primary subsystem copies data to the intermediary subsystem synchronously, and the intermediate subsystem copies the data to the secondary subsystems asynchronously. A timer 130 is included in the intermediate storage subsystem 100c to provide timing information to data requests. The timer attaches a timestamp to a control data of a write request received from primary storage subsystem 100a. FIG. 2 illustrates a synchronous remote copy method performed between the primary subsystems and the intermediate subsystem. The process 200 is invoked when a write request arrives from the primary host 110a to the primary storage subsystem 100a. At step 205, when the primary storage subsystem receives a write request, it stores the write data to a non-volatile

storage area. The primary subsystem system then sends the write data to the intermediate storage subsystem 100c and waits for the acknowledgement from the intermediate storage subsystem 100c (step 210). When the intermediate storage subsystem 100c receives write data from the primary storage subsystem 100a, it generates at least a portion of control data of the write data (step 215). The generation step involves generating and attaching a sequence number to the header of the write request. A timestamp may also be attached to the header. At step 220, the intermediate storage subsystem 100c stores the write data from the primary storage subsystem 100a and its control data to a non-volatile or stable storage area. However, **Yamagami**'s intermediate storage subsystem 100c merely generates control data including a timestamp, but does not make use of the timestamps to process the remote copy requests at each of the secondary storage subsystems differently, i.e., to determine, at each of the secondary storage subsystems, which remote copy requests to process based on a respective first time parameter/timestamp included in a synchronizing request issued by a corresponding primary storage subsystem and timestamps associated with the remote copy requests. Since **Yamagami** fails to provide any such a remote-copy-request discriminative processing scheme, it does not provide the (1)-(3) features as now recited in the independent claims.

An article entitled "Advanced Functions for Storage Subsystems" by **Azagury** et al. relates to an extended remote copy ("XRC"). FIG. 2 illustrates a schematic view of XRC, an asynchronous, continuous remote copy solution, which is driven by software running on an IBM zSeries host. See p. 273. When a write request is received from the host, the control unit places information about the data in a queue of updates, known as a side file. The information includes a timestamp provided by the host. After the information is queued and normal write processing completes, the control unit notifies the host. The zSeries Parallel Sysplex has an integrated timer, which allows a single clock to be shared by multiple zSeries hosts. By associating a time with each write, the write request order can be reconstructed. However, **Azagury**'s extended remote copy only associates a timestamp with write requests, but does not determine any first time parameter based on timestamps included in a synchronization request. As such, **Azagury** also does not make use of such a timestamp to process the remote copy requests at each of the secondary storage subsystems differently, i.e., to determine, at each of the secondary storage subsystems, which remote copy requests to process based on a respective first time parameter/timestamp included in a synchronizing request issued by a corresponding primary storage subsystem and timestamps associated with

the remote copy requests. Since **Azagury** fails to provide any such a remote-copy-request discriminative processing scheme, it does not provide the (1)-(3) features as now recited in the independent claims.

Conclusion

Therefore, since the cited references fail to teach or suggest the above described (1)-(3) features of the present invention as recited in independent claims 1, 8 and 15 in combination with the other limitations recited in each of the independent claims, it is submitted that all of the claims are patentable over the cited references whether said references are taken individually or in combination with each other.

In view of all the above, clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references, Applicant respectfully contends that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable consideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and telephone number indicated below.

Respectfully submitted,

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